

**STATE OF OHIO (DAS)**  
 CLASSIFICATION  
 SPECIFICATION

<b><u>CLASSIFICATION SERIES:</u></b> Public Health Entomologist	<b><u>SERIES NO.:</u></b> 8326
<b><u>MAJOR AGENCIES:</u></b> Health only	<b><u>EFFECTIVE DATE:</u></b> 02/26/2012

**SERIES PURPOSE:**

The purpose of the public health entomology occupation is to study/investigate insects that transmit disease agents to humans & maintain readiness to respond to emergencies caused by epidemics, disaster-related vector problems & bio-terrorist events.

At the full performance level, incumbents independently conduct field & laboratory investigations of insects that transmit disease agents to humans or evaluate effectiveness of control measures on vector populations.

At the managerial level, incumbents administer statewide public health entomology program, maintain readiness to respond to emergencies caused by epidemics, disaster-related vector problems & bio-terrorist events & supervise assigned staff.

Glossary:

Arthropod: (e.g., bugs, insects, spiders, ticks), organisms with external skeleton & jointed legs

Arbovirus: virus transmitted by insects such as encephalitis

Bio-Terrorism: use of disease agents (e.g., anthrax) by terrorist groups as an act of war / violence against military &/or civilians targets.

Encephalitis: inflammation of the brain.

Entomology: the branch of zoology that deals with insects.

Trichinosis: a disease caused by the presence of trichinae in the intestines & muscle tissue usually acquired by eating insufficiently cooked pork from an infected hog.

Vector: a bearer or carrier, an insect (e.g., mosquito, tick) that transmits a disease-producing organism from one host to another.

Vector borne disease (e.g., Lacrosse encephalitis, St. Louis encephalitis, West Nile Virus, Eastern Equine Encephalitis, Rocky Mountain Spotted Fever, Lyme Disease, Hanta Virus).

Wild vertebrates (e.g., deer, raccoons, birds).

Zoonoses: disease transmittable from animal to man (e.g., rabies).

<b><u>CLASS TITLE</u></b>	<b><u>CLASS NUMBER</u></b>	<b><u>PAY RANGE</u></b>	<b><u>EFFECTIVE</u></b>
Public Health Entomologist	83261	32	01/09/2005

**CLASS CONCEPT:**

The full performance level class works under general supervision & requires considerable knowledge of entomology in order to independently conduct field & laboratory investigations of insects that transmit disease agents to humans or evaluate effectiveness of control measures on vector populations.

<b><u>CLASS TITLE</u></b>	<b><u>CLASS NUMBER</u></b>	<b><u>PAY RANGE</u></b>	<b><u>EFFECTIVE</u></b>
Public Health Entomologist Administrator	83266	16	01/09/2005

**CLASS CONCEPT:**

The second managerial level class works under general direction & requires thorough knowledge of entomology & supervisory principles & techniques in order to administer statewide public health entomology program, maintain readiness to respond to emergencies caused by epidemics, disaster-related vector problems & bio-terrorist events & supervise assigned staff.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Public Health Entomologist	83261	13	01/09/2005	32

**JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)**

Independently conducts field & laboratory investigations related to arthropod-borne & zoonotic disease or related to arthropods, which are agents of disease or injury (e.g., collects, does surveillance, identifies, evaluates control of pests & vector species; determines vector-borne disease potential; researches vector potential & biology of blood-sucking arthropods in Ohio; collects & studies vertebrate animal tissues & serum samples for disease reservoir determination), evaluates effectiveness of control measures on vector populations, gathers & analyzes data (e.g., on efficacy of pesticides applied experimentally or in routine practice, under variable conditions of dosage, droplet size, temperature, time of day) & makes recommendations from results; collects data on public health pesticides detailing types available, registration issues, formulations, current restrictions, equipment used in application, hazards & relative costs, investigates efficacy of new chemical & biological agents & techniques in controlling arthropods of public health importance formulates control recommendations to aid in formulation of control programs for local communities.

Creates reports of findings, explaining biology of problem species & control strategies when appropriate; summarizes & analyzes data from surveillance programs & prepares reports of findings for federal, state & local agencies; maintains data on distribution, biology & public health importance of arthropods in Ohio; designs investigations, collects & analyzes data & creates reports of investigations & research findings for scientific or general publication or for release to public.

Maintains equipment, supplies & readiness to respond by investigation & control of biological hazards in bio-terrorism treat or attack; coordinates training, educational, surveillance & control programs with federal (e.g., Center for Disease Control; United States Dairy Association), State of Ohio (Ohio Department of Agriculture; Ohio Environmental Protection Agency) & local agencies & universities, implements & maintains surveillance programs for disease vectors (e.g., ticks & mosquitoes), receives & identifies specimens submitted by local health departments, medical facilities & general public & performs pooling, serum separation & tissue extraction of disease surveillance specimens & suspect disease vector pest species for microbiological testing, oversees maintenance & operation of insect research facility, rears mosquito specimens, oversee maintenance of colonies of vector species used for viral transmission research, oversees maintenance of security & integrity of vector colonies, plans & conducts related surveillance, laboratory & field programs (e.g., filth fly study; investigations requested by Ohio Environmental Protection Agency, rabies baiting & surveillance with methods of obtaining precise results in public health entomology & zoonotic disease investigations, consults with authoritative individuals, provides training, advice, consultation & assistance to laboratories, university researchers & students, sanitarians, public health & school nurses, news media & others in collection, identification & study of arthropods, arthropods public health importance, prevention & control, response to questions from local health agencies, medical personnel & general public, presents information on epidemiology of vector borne diseases, biology & control of vectors & other arthropods of public health importance to national, state, local & private agencies & associations, develops trainings & education seminars for Ohio Department of Health, local health departments, universities, federal & state organizations & private associations; designs & creates educational materials (e.g., informative flyers; training manuals, reports), concerned with arthropods/borne diseases & their vectors & other arthropods of public health importance, maintain reference collection of arthropods of public health importance & of slides, digital photography, technical data on public health pesticides (e.g., type, registration, formulation, restrictions, equipment used in application, hazards, relative costs), & other illustrative materials related to program as identification & training aids.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of biohazard safety procedures for entomology laboratory & bio-safety level 3 containment laboratory; human relations; public health entomology policies & procedures; employee training & development; public health entomology policies & procedures; entomology; zoology; botany; laboratory procedures. Skill in dissection & compound microscopes; calculator; personal computer; photo copier; fax machine; chill table; animal, mosquito &/or tick collection equipment; dissection of insects; van &/or pick up truck. Ability to use research methods in gathering data; use statistical analysis; use geometry & trigonometry; proofread technical materials, recognize errors & make corrections; prepare & deliver speeches before specialized audiences & general public; gather, collate & classify information about data, people or things; work alone on most tasks; demonstrate dexterity in use of animal, mosquito &/or tick collection equipment; demonstrate dexterity in the dissection of insects.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Completion of graduate core program in biological sciences (e.g., entomology; biochemistry; microbiology; molecular genetics; plant biology; biology; zoology; ecology) to include coursework in entomology, insect physiology & structure &

laboratory procedures.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

Exposed to potentially dangerous animals infected with rabies (e.g., raccoons); exposed to animal bites &/or scratches; exposed to infectious diseases such as La Crosse, St. Louis, West Nile or Eastern Equine Encephalitis, hantavirus &/or rabies.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Public Health Entomologist Administrator	83266	EX	01/09/2005	16

**JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)**

Administers statewide program of vector borne disease prevention targeting arthropods which transmit disease agents to humans (e.g., develops field & laboratory capabilities for investigation, research, surveillance & control of vector borne diseases to include La Crosse, St. Louis, Eastern Equine & West Nile Encephalitis, Rocky Mountain Spotted Fever, Lyme Disease, Hantavirus), maintains readiness to respond to emergencies caused by epidemics, disaster-related vector problems & bio-terrorist events, develops recommendations for program goals & objectives, program implementation & evaluation related to vector borne diseases, instructs & trains staff in methods & procedures for field & laboratory investigations, office management & required record files per local, state & federal guidelines, prepares budgets & allocates resources for purchases, plans & carries out public health educational program related to vector borne diseases to include prevention & control, plans & conducts training seminars for public health officials, academic students & general public, participates in internal & external committees related to vector-borne disease issues to include bio-terrorism & emerging infectious diseases & supervises assigned staff.

Oversees epidemiological investigations & reporting of endemic & imported human cases of vector-borne disease, oversees state of the art laboratory for identification of arthropod vector species & vector-borne arthropod & animal tissues; oversees preparation & updating of appropriate sections of Ohio Department of Health Infectious Disease Control Manual, plans & oversees implementation of program of surveillance & investigation of vector borne agents, develops integrated vector control strategy with proportional emphasis of chemical, physical, biological & educational means of prevention & control strategy with proportional emphasis on chemical, physical, biological & educational means of prevention & control.

Acts as liaison to local, state & federal agencies, universities, professional associations & commissions on issues related to vector borne diseases; consults with research scientists & technical experts on vector borne disease prevention & control issues.

Writes & oversees preparation of detailed scientific articles & reports on investigations for department & other agencies, for scientific journals & presentations at scientific meetings; prepares departmental news releases & health advisories for public media; prepares grants & scientific documentation.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of biohazard safety procedures for entomology laboratory & bio-safety level 3 containment laboratory; human relations; public health entomology policies & procedures; employee training & development; public health entomology policies & procedures; entomology; zoology; botany; laboratory procedures; supervisory practices & procedures. Skill in dissection & compound microscopes; calculator; personal computer; photo copier; fax machine; chill table; animal, mosquito &/or tick collection equipment; dissection of insects; van &/or pick up truck. Ability to use research methods in gathering data; use statistical analysis; use geometry & trigonometry; proofread technical materials, recognize errors & make corrections; prepare & deliver speeches before specialized audiences & general public; gather, collate & classify information about data, people or things; work alone on most tasks; demonstrate dexterity in use of animal, mosquito &/or tick collection equipment; demonstrate dexterity in the dissection of insects.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Completion of graduate core program in biological sciences (e.g., entomology; biochemistry; microbiology; molecular genetics; plant biology; biology; zoology; ecology) to include coursework in entomology, insect physiology & structure & laboratory procedures; 60 mos trg or 60 mos exp in entomology related to public health; 12 mos trg or 12 mos exp in supervisory principles & techniques.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

Exposed to potentially dangerous animals infected with rabies (e.g., raccoons); exposed to animal bites &/or scratches; exposed to infectious diseases such as La Crosse, St. Louis, West Nile or Eastern Equine Encephalitis, hantavirus &/or rabies.